LIVERPOOL INVESTMENT LETTER

October 2023



Julian Hodge Institute of Applied Macroeconomics



LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

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The Julian Hodge Institute was launched in autumn 1999 in a new collaboration between the Cardiff Business School of Cardiff University and Hodge. The aim of the Institute is to carry out research into the behaviour of the UK economy, and to study in particular its relationship with the other economies of Europe. The research has been particularly germane in recent years and has proved to be of significant social and political relevance as Europe has navigated the difficulties of the global financial crash, the Eurozone crisis and most recently the UK referendum on EU membership. The Liverpool Investment Letter is written by Patrick Minford, with the assistance of other members of the Group; in particular the emerging markets section is written by Anupam Rastogi, and the focus on Japan is written by Francesco Perugini. The Investment Letter is published monthly.

The Liverpool Research Group in Economics is pursuing a research programme involving the estimation and use of macroeconomic models for forecasting and policy analysis. The Group is now mainly based in Cardiff Business School, Cardiff University, and is indebted to the School and to the Hodge Foundation for their support. The Group's activities contribute to the programmes being pursued by the Julian Hodge Institute of Applied Macroeconomics. This Liverpool Investment Letter is typeset by David Meenagh and published on behalf of the group by Liverpool Macroeconomic Research Limited, which holds the copyright

ISSN 0951-9262

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October 2023

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| policies Monetary policy is in panic mode around the developed world, with central banks seeking to remedy their previous mistake in stimulating inflation by now overtightening monetary conditions. The risks of keeping interest rates high for a prolonged period are that the world is tipped into a bad recession, and even another financial crisis. Far better to let inflation continue to fall steadily and get back to stable moderate real interest rates, so that the world economy can return to stable growth and steady low inflation. Previous over-stimulus is not remedied by overkill now; it embeds yet more instability. | |
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POLICY COMMENTARY — WE ARE SUFFERING FROM MONETARY INSTABILITY PRODUCED BY LARGE CENTRAL BANK MISTAKES ABETTED BY POOR FISCAL POLICIES

It is hard not to be alarmed by the sharp recent rises in long term interest rates around the world, including here where the rises under Liz Truss's brief government look modest by comparison. It is astonishing that the world has gone from virtually zero interest rates a few years ago to rates of 5% or more today and the latest expectation that central banks will keep them there for some time even as inflation continues to fall. This is represented as central banks 'making sure' that inflation is well and truly stamped on

This monetary volatility is a far cry from the central aim of monetary policy which is to keep inflation and the economy stable in the face of supply and demand shocks. Central banks around the developed world from the end of the 1980s either got independence to set monetary policy or had de facto independence formally recognised, with the explicit objective of creating such stability. However, since the Covid crisis they have signally failed to do so, first creating a massive monetary expansion and ensuing inflation as supply bottlenecks and the Ukraine war caused commodity shortages; interest rates were driven to zero by these policies, causing widespread capital misallocation at this zero price. As the resulting inflation took off, they were slow to reverse these expansionary policies, and then belatedly reversed into sharp rises in interest rates, apparently in panic at their loss of credibility. And here we are, with them continuing to panic and threatening the continuation of these high rates. Yet the growth of money and credit is now turning negative month on month, with year on year growth down to zero.

This account of events applies, with some differences in the percentages, across most developed economies, including the US, the EU and ourselves. So what policy conclusions should we draw for today from the mess we are in?

The first must be to stop this monetary overkill, fed by central bank panic and insecurity. Inflation is now falling steadily as a result of sharp monetary tightening that has caused money supply growth to go into reverse. Central banks are focusing on signs of market vigour — e.g. in some parts of the labour market — as if this is a harbinger of more inflation. It is not; inflation resulted from those past policies and wages were driven by that inflation, in a process of pure catch-up on the unexpected inflation spike and are not themselves the cause of inflation. As inflation comes down, wage increases will respond to that expectation and come down too. Some policymakers talk of expectations extrapolating the past, but the data strongly rejects any such theory. So central banks should calm down

Table 1: Summary of Forecast

| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|----------------------------|-------|-------|-------|-------|-------|-------|------|
| GDP Growth ¹ | 1.6 | -10.4 | 8.7 | 4.2 | 0.4 | 1.9 | 2.0 |
| Inflation CPI | 1.7 | 0.9 | 2.5 | 9.1 | 7.5 | 3.5 | 2.0 |
| Wage Growth | 3.5 | 1.6 | 5.9 | 6.0 | 6.1 | 3.7 | 2.0 |
| Survey Unemployment | 3.8 | 4.5 | 4.5 | 3.7 | 3.8 | 2.9 | 2.8 |
| Exchange Rate ² | 78.3 | 78.2 | 81.4 | 79.1 | 79.4 | 79.1 | 79.0 |
| 3 Month Interest Rate | 0.8 | 0.2 | 0.1 | 2.0 | 5.0 | 4.3 | 3.0 |
| 5 Year Interest Rate | 0.6 | 0.1 | 0.8 | 2.5 | 4.3 | 4.2 | 3.0 |
| Current Balance (£bn) | -63.3 | -67.5 | -34.3 | -93.9 | -25.4 | -14.7 | 1.5 |
| PSBR (£bn) | 64.3 | 312.9 | 121.1 | 130.5 | 95.6 | 38.3 | 23.5 |

¹Expenditure estimate at factor cost

and respect the evidence that inflation responds to prior monetary expansion.

Failure to do this risks provoking another financial crisis. Financial institutions are nursing large capital losses on their bond holdings; and, much as with subprime mortgages in the 2008 crisis it is impossible to know where this could blow up the financial system; several smaller banks and one large one, Credit Suisse, have already collapsed.

So, both monetary analysis and commonsense caution join in urging central banks to ease off the current ferocity of their approach and avoid dangerous overkill. By that route we can return the sooner to a stable low inflation rate and a recovering economy; central banks would return to that task, having learnt the lessons from their massive mistakes of the recent past. There is no political appetite to go back on their independence at this point. But more mistakes along these lines could well create one.

There are other policy lessons to be learnt from the policy mistakes of not just the Covid episode but also of the decade and a half since the 2008 crisis. Near-zero interest rates began after the crisis, as the job of stimulating recovery was largely passed to central banks, as governments retrenched after their large bailouts. At the same time regulation on banks was sharply tightened. The result was that central banks printed money, driving rates down close to zero, but failed to stimulate bank lending. So, recovery was weak and inflation low, encouraging yet more money printing, which eventually pushed interest rates to zero even on the longest maturities. Meanwhile productivity growth collapsed — not just here but across the whole OECD.

There would have been a healthier recovery if governments had supported demand and bank regulation had been postponed to a much later date. Governments should also have pursued growth policies; instead the OECD concocted

²Sterling effective exchange rate, Bank of England Index (2005 = 100)

a plan to raise corporation tax rates, putting a floor, yet to be fixed, beneath them.

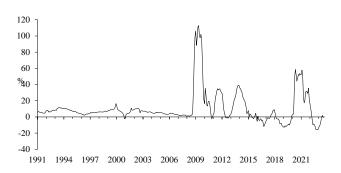
So, another major lesson of the recent past is that government fiscal policy has an important role to play in the economy, both in demand management and in keeping tax low and friendly to entrepreneurs. Yet another is that regulation should be cautious and focus on long term stability, and not aggravate the business cycle. Had this been done after the 2008 crisis, interest rates would not have gone to zero, with all the damage done to capitalism by the availability of free capital; why raise the productivity of capital if it is free? Furthermore, large dominant firms get the advantage as small firms cannot borrow at these zero rates; so monopoly thrives.

Unfortunately, the consensus holds that fiscal policy should be stopped by short-sighted 'fiscal rules', which were begun here by George Osborne after the 2008 crisis. These helped to push interest rates to zero, while the government embarked on cuts to necessary infrastructure and core public services, abandoning plans for lower, flatter tax rates that were then under discussion. We are now learning the hard way that such policies drive growth lower; ironically, this in turn undermines long run fiscal prospects as revenues stall with the economy flatlining.

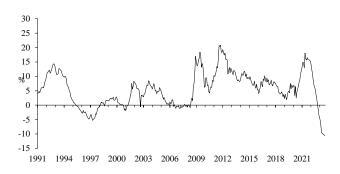
This government still has the chance to learn from these mistakes, and the Bank of England can quickly retreat from overkill towards renewed monetary stability. Mistakes are human; but humans are adaptable and can learn. So can policymakers.

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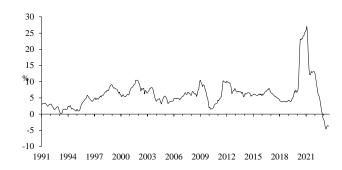
U.S.: Growth in M0 (Yr - on - Yr)



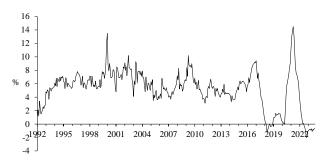
U.S.: Growth in M1 (Yr - on - Yr)



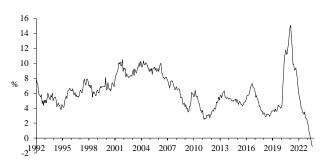
U.S.: Growth in M2 (Yr - on - Yr)



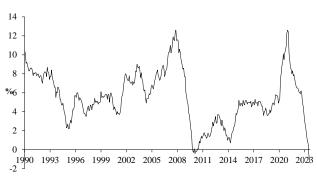
UK: Notes and Coins in Circulation Growth



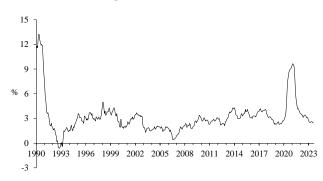
UK: M4 Growth



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

BOJ and Governments Latest Moves

Late last month, the Bank of Japan (BOJ) maintained its ultra-loose policy and left rates unchanged, mindful of the "extremely high uncertainties" on the growth outlook domestically and globally. In a policy statement after the September meeting, the BOJ said it would maintain short-term interest rates at -0.1% and cap the 10-year Japanese government bond yield around zero, as widely expected. "With extremely high uncertainties surrounding economies and financial markets at home and abroad, the Bank will patiently continue with monetary easing, while nimbly responding to developments in economic activity and prices as well as financial conditions," the Bank of Japan said in its policy statement.

The Japanese central bank's ultra-loose monetary position, though, marks Japan as an outlier among major central banks, which have raised interest rates in the last two years to control spiralling inflation. Partly as a result of this policy divergence between the BOJ and the rest of the world, the Japanese yen sank about 0.5% to about 148.3 against the dollar after the decision, while 10-year Japanese government bond yields were largely unchanged. The yen has now weakened more than 11% against the greenback this year to date.

The Bank of Japan also decided to continue large-scale monetary easing and to maintain its yield curve control and other measures. The yield curve control, known also as the YCC, is a policy tool where the central bank targets an interest rate, and then buys and sells bonds as necessary to achieve that target. It is designed to guide the short-term interest rate to minus 0.1% and keep the yield on 10-year Japanese government bonds (JGBs) around zero. At its monetary policy meeting on the day, the BOJ decided to continue to set the upper limit of the long-term bond yield at 1% in line with economic and price conditions, while allowing the yield to fluctuate in the range of around "plus or minus 0.5%."

At its previous policy meeting in July, the BOJ loosened its yield curve control to allow longer term rates to move more in tandem with rising inflation in Governor Kazuo Ueda's first policy change since assuming office in April. "Since we published the July outlook report, inflation isn't overshooting sharply. But it's not slowing as much as we expected," Ueda said at a press conference after the September meeting. "When we can foresee inflation stably and sustainably hitting 2%, we will consider ending YCC or revising negative interest rates," he added.

Many economists brought forward their forecasts for a quicker exit from the BOJ's ultra-loose monetary policy to sometime in the first half of 2024 after Ueda said in a recent interview that the BOJ could have sufficient data by

the end of this year to determine when it could end negative rates. "It wasn't as if any time frame for achieving our price target had changed. I thought that ruling out the possibility completely would bind the discussion of upcoming policy-setting meetings," Ueda said Friday.

There has been recent talk of the sliding yen forcing the BOJ's hand. Indeed, the Japanese yen slipped after the BOJ policy meeting. "I think where their hand could be forced is looking at dollar-yen," said Bob Michele, global head of fixed income at JP Morgan Asset Management. "We're awfully close to 150 ... when that starts to get to 150 and higher, then they have to step back and think: the selloff in the yen is now starting to import probably more inflation than we want," he added.

However, despite core inflation exceeding the Bank of Japan's stated 2% target for 17 consecutive months, BOJ officials have been cautious about exiting its radical stimulus, which was put in place to combat decades of deflation in the world's third-largest economy. "For Japan to stably and sustainably achieve 2% inflation, we need to see strong demand support inflation. We need to confirm that a positive wage-inflation cycle has kicked off. This is where we still need time. Trend inflation is still somewhat short of 2%," Ueda said.

In the meanwhile, to stimulate demand Japan's Prime Minister Fumio Kishida has unveiled the pillars of a new economic stimulus package to be compiled in October to help households ease the pain of price rises and to boost wages. The package will include measures to protect people from cost-push inflation, back sustainable wage and income growth, promote domestic investment to spur growth, reforms to overcome the dwindling population, and more infrastructure investment. With the new economic measures, the premier pledged to shift Japan's economy, which has tended to focus on cost cutting, away from such practices. The size and substance of the extra budget is still unclear. However, Hiroshige Seko, the LDP's secretarygeneral, during the press conference said that "Economic measures worth the equivalent of around 3% of our country's gross domestic product will be needed". "We may need ¥15 trillion or around ¥20 trillion if possible", he

During the COVID-19 pandemic, the government compiled multiple supplementary budgets each worth tens of trillions of yen to finance measures to ease the fallout from the crisis, such as cash benefits to individuals. With economic activity starting to regain momentum and with demand surpassing supply in some cases, a senior official of an economy-related government agency warned, "If massive economy-boosting measures are put into action, that could further fuel inflation."

MARKET DEVELOPMENTS

B ond and equity markets are in some shock over the prospect of interest rates staying high and even going higher with central bank overkill. We don't think this is sustainable and expect rates to fall slowly from here. This should set the stage for a revival in bond and equity prices.

Table 1: Market Developments

| | | arket evels | | tion for ct 2024 | |
|-----------------------|--------|----------------|----------|---------------------|--|
| | Sep 10 | Oct 13 | Previous | Current | |
| | | | Letter | View | |
| Share Indices | | | | | |
| UK (FT 100) | 7478 | 7600 | 7635 | 7759 | |
| US (S&P 500) | 4465 | 4326 | 4786 | 4638 | |
| Germany (DAX 30) | 15740 | 15187 | 20022 | 19317 | |
| Japan (Tokyo New) | 2359 | 2309 | 3229 | 3161 | |
| Bond Yields (governm | ent | | | | |
| UK | 4.43 | 4.34 | 4.00 | 4.00 | |
| US | 4.26 | 4.61 | 3.50 | 3.40 | |
| Germany | 2.60 | 2.73 | 2.20 | 2.20 | |
| Japan | 0.65 | 0.76 | 0.50 | 0.50 | |
| UK Index Linked | 1.06 | 1.25 | 1.00 | 1.00 | |
| Exchange Rates | | | | | |
| UK (\$ per £) | 1.25 | 1.21 | 1.20 | 1.20 | |
| UK (trade weighted) | 81.92 | 80.79 | 77.9 | 77.3 | |
| US (trade weighted) | 109.13 | 110.54 | 113.2 | 113.2 | |
| Euro per \$ | 0.93 | 0.95 | 0.98 | 0.98 | |
| Euro per £ | 1.17 | 1.16 | 1.18 | 1.18 | |
| Japan (Yen per \$) | 147.67 | 149.68 | 140.0 | 140.0 | |
| Short Term Interest R | lates | | | | |
| UK | 5.56 | 5.40 | 4.00 | 4.00 | |
| US | 5.67 | 5.66 | 4.30 | 4.30 | |
| Euro | 3.80 | 3.97 | 3.00 | 3.00 | |
| Japan | -0.03 | -0.03 | 0.10 | 0.10 | |

Table 2: Prospective Yields ¹

| Equities: Co | ntribution | to £ viel | d of: | | | |
|-------------------------|-------------------|----------------|------------------|-------------------------------|----------|--------|
| Equitos co | Dividend Yield | Real Growth | Inflation | Changing Dividend Yield | Currency | Total |
| UK | 2.10 | 1.1 | 3.0 | -2.00 | | 4.20 |
| US | 2.00 | 1.2 | 3.0 | 3.00 | 1.14 | 10.34 |
| Germany | 2.10 | 1.2 | 3.0 | 23.00 | -1.76 | 27.54 |
| Japan | 1.90 | 1.1 | 1.8 | 34.00 | 7.53 | 46.33 |
| UK indexed ² | 1.25 | | 3.0 | 16.00 | | 20.25 |
| Hong Kong ³ | 2.60 | 4.8 | 3.0 | -21.00 | 1.14 | -9.46 |
| Malaysia | 3.30 | 4.0 | 3.0 | 37.00 | 1.14 | 48.44 |
| Singapore | 3.50 | 1.0 | 3.0 | -5.00 | 1.14 | 3.64 |
| India | 1.40 | 6.6 | 3.0 | 11.00 | 1.14 | 23.14 |
| Korea | 1.10 | 2.5 | 3.0 | -23.00 | 1.14 | -15.26 |
| Indonesia | 2.20 | 5.0 | 3.0 | 24.00 | 1.14 | 35.34 |
| Taiwan | 2.80 | 1.5 | 3.0 | 5.00 | 1.14 | 13.44 |
| Thailand | 3.20 | 2.8 | 3.0 | 19.00 | 1.14 | 29.14 |
| Bonds: Cont | ribution to | £ yield | of: | | | |
| | Redemp | | Changing | Currenc | y | Total |
| | Yield | i | Nominal Rates | | | |
| UK | 4.3 | 9 | 3.88 | | | 8.27 |
| US | 4.6 | 1 | 12.15 | 1.14 | | 17.90 |
| Germany | 2.7 | 3 | 5.32 | -1.76 | | 6.29 |
| Japan | 0.7 | 6 | 2.62 | 7.53 | | 10.91 |
| Deposits: Co | | | | | | |
| | Depos | | Currency | Total | | |
| UK | Yield 5.4 | - | | 5.40 | | |
| US | 5.4 5.6 | - | 1.14 | 6.79 | | |
| | 3.0 3.9 | | -1.76 | 2.20 | | |
| Euro | -0.0 | | -1.76 7.53 | 7.50 | | |
| Japan | -0.0 | 3 | 1.33 | 7.50 | | |

 $^{^1}$ Yields in terms of εs or s can be computed by adjusting the £-based yields for the expected currency change. ² UK index linked bonds All Stocks

³ Output based on China.

Table 3: Portfolio(%)

| | Sterling Inves | | Dollar Base | Dollar Based Investor | | Investor |
|--------------------------|---------------------|-----------------|---------------------|------------------------------|---------------------|-----------------|
| | September Letter | Current View | September Letter | Current View | September Letter | Current View |
| UK Deposits (Cash) | 5 | 5 | 5 | 5 | 1 | 1 |
| US Deposits | - | - | - | - | - | - |
| Euro Deposits | - | - | - | - | - | - |
| Japanese Deposits | - | - | - | - | - | - |
| UK Bonds | - | - | - | - | - | - |
| US Bonds | - | - | - | - | - | - |
| German Bonds | - | - | - | - | - | - |
| Japanese Bonds | - | - | - | - | - | - |
| UK Shares | 19 | 19 | 14 | 14 | 17 | 17 |
| US Shares | 14 | 14 | 19 | 19 | 16 | 16 |
| German Shares | 14 | 14 | 14 | 14 | 21 | 21 |
| Japanese Shares | 9 | 9 | 9 | 9 | 11 | 11 |
| Hong Kong/Chinese Shares | 4 | 4 | 4 | 4 | 4 | 4 |
| Singaporean Shares | 4 | 4 | 4 | 4 | 4 | 4 |
| Indian Shares | 4 | 4 | 4 | 4 | 4 | 4 |
| Thai Shares | 3 | 3 | 3 | 3 | 3 | 3 |
| South Korean Shares | 4 | 4 | 4 | 4 | 4 | 4 |
| Taiwanese Shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Brazilian Shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Chilean Shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Mexican Shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Peruvian shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Other: | | | | | | |
| Index-linked bonds (UK) | - | - | - | - | - | - |

INDICATORS AND MARKET ANALYSIS FOREIGN EXCHANGE MARKETS





Japan: Yen Per U.S. Dollar



UK: Dollars Per Pound Sterling



UK: Trade-Weighted Index (Bank of England 1990 = 100)

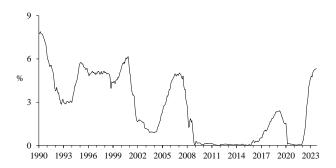


GOVERNMENT BOND MARKETS

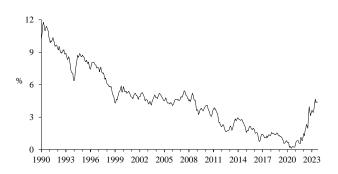
U.S.: Yield on Long-Term Government Bonds



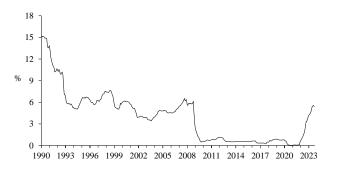
U.S.: 3-Month Treasury Bill



U.K.: Yield on Long-Term Government Bonds



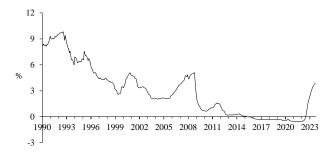
U.K.: 3-Month Certificate LIBOR Rate



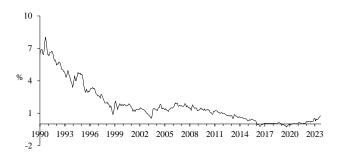
Germany: Yield on Public Authority Bonds



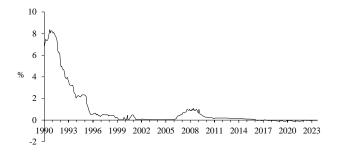
Germany: 3-Month Interbank Deposit Rate



Japan: Yield on Long-Term Government Bonds

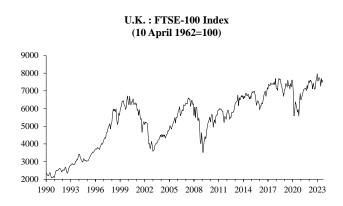


Japan: 3-Month Money Market Rate

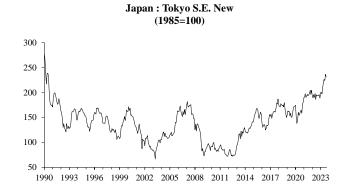


MAJOR EQUITY MARKETS









EMERGING MARKETS

Anupam Rastogi

India

The Indian economy continues its unwavering march forward, defying earlier scepticism as structural reforms encountered vehement opposition from political adversaries. Now, the fruits of these reforms are becoming increasingly evident, even against the backdrop of rising global crude oil prices and a slowdown in international trade. India is a beacon of resilience, weathering geopolitical and exchange rate fluctuations with poise fortified by a substantial foreign reserve buffer.

Projections for India's gross domestic product (GDP) forecast a robust 6.5% growth in the fiscal year concluding in March 2024, with expectations of further acceleration to 6.6% in FY25. The private sector is reaping substantial profits, and their production capacity utilization has surged significantly. Private consumption is on the rise, and the post-pandemic recovery remains palpable. Domestic demand remains robust, albeit at a somewhat tempered pace.

India's resounding commitment to "Make in India, Make for the World", showcased at the recent World Economic Forum, signifies its eagerness to enhance its manufacturing sector to 25% by 2025. A series of transformative economic policies, including the Goods and Services Tax, Insolvency and Bankruptcy Code, asset monetization, labour law reforms, Production Linked Incentives, National Infrastructure Pipeline, and the Gati Shakti mission for multimodal connectivity, have effectively addressed structural shortcomings.

Inflation, as measured by the consumer price index, retreated to 6.83% in August from a 15-month high of 7.44% in July, primarily attributed to a decline in the rate of increase in vegetable prices. This suggests a target inflation of 5.3% YoY in FY24 is well within reach. Consequently, it is anticipated that the Reserve Bank of India (RBI) will maintain its current interest rates for the foreseeable future, as noted in its recent Monetary Policy Committee (MPC) decision to keep the policy repo rate at 6.5%. The rationale for this decision lies in the need to remain vigilant in the face of escalating global food and energy prices and monitor the full impact of previous rate adjustments on the economy.

In Q1 of FY24, India's current account deficit expanded to \$9.2 billion, accounting for 1.1% of the GDP, compared to \$1.4 billion or 0.2% in the prior quarter. A widening trade deficit primarily drove this uptick, as imports experienced a



sharp decline and net services receipts moderated due to global demand weakness. On the flip side, the capital account surplus saw a substantial surge to \$34.4 billion, thanks to renewed foreign portfolio investments, banking capital inflows, and external commercial borrowings. Consequently, the Balance of Payments (BoP) surplus reached a seven-quarter high at \$24.4 billion in Q1 of FY24.

The Indian stock market is ablaze with activity, witnessing a remarkable performance. The BSE Midcap and the BSE Smallcap indices have soared by over 35% in the past six months. Surprisingly, foreign investors' positions in India are not as "overweight" as one might assume, despite a growing consensus that India holds the mantle of Asia's long-term structural growth story, surpassing China. Healthy corporate earnings growth and an optimistic outlook for the upcoming years will continue to fuel market enthusiasm.

On the international stage, India's influence is rapidly expanding. The recent Group of 20 summit held in New Delhi underscored India's ascendancy as a key player in global affairs, a notion consistently championed by government-affiliated media outlets. Prime Minister Narendra Modi, eyeing an unprecedented third consecutive national election victory, is set to make this resurgence a central theme of his campaign. The official announcement of the India-Middle East-Europe Economic Corridor at the G20, linking India with the Gulf and Europe, stands as India's counterpart to China's Belt and Road Initiative. However, the recent Israel-Hamas conflict is likely to introduce delays in the realisation of this ambitious corridor.

| | 22-23 | 23-24 | 24-25 | 25-26 | 26-27 |
|-------------------------|-------|-------|-------|-------|-------|
| GDP (%p.a.) | 7.0 | 6.5 | 6.6 | 6.7 | 6.8 |
| WPI (%p.a.) | 6.5 | 5.3 | 5.0 | 4.2 | 4.0 |
| Current A/c(US\$ bill.) | -67.0 | -60.0 | -40.0 | 0.0 | 0.0 |
| Rs./\$(nom.) | 81.0 | 82.0 | 83.5 | 85.0 | 85.0 |

China

China finds itself contending with challenges mainly of its own making as it aspires to surpass the United States both in economic prowess and military might, which has triggered robust responses from its neighbouring nations, and the United States. China's leadership underestimated the intricate interplay between economic freedom, entrepreneurship, and political liberty. Its economic success, predominantly built on extensive infrastructure investment and long-term leasing of land to foreign direct investors, now stands at a crossroads. Property development, which forms the core of China's economy, contributes approximately a quarter of its overall economic activity.

Presently, China is grappling with a property market crisis as prominent developers teeter on the brink, and housing sales, measured in floor space, have regressed to levels last witnessed in 2015. Nevertheless, the likelihood of a fullblown financial crisis remains remote. The peculiarities of China's housing market and Beijing's firm grip on the financial system will likely stretch this process over a protracted period. The collateral damage will significantly impact bank balance sheets, impairing their capacity to support economic growth for years to come. While widespread financial turmoil can be averted, especially if housing and land prices stabilize, Beijing is poised to extend support to cash-strapped local governments and permit smaller lenders to undergo bankruptcy proceedings. Both banks and China's "shadow banks," such as trust firms, have already reduced their exposure in terms of total loans to property developers and home buyers from 30% in 2019 to 23%.

Recognizing the pressing challenges posed by external factors and weakening domestic demand, China's central bank, the People's Bank of China, has announced an intent to strengthen policy support for the nation's economy. They are poised to employ precise and robust monetary policy measures to stimulate demand and bolster confidence.

Anticipation suggests that China will achieve its economic growth target of approximately 5% for the current year and gradually decelerate to 4.8% in 2024. The nation's GDP growth rate is expected to hover around 3.5% in the long term.

September marked a notable rebound in China's manufacturing sector, with the official manufacturing purchasing managers' index rising to 50.2, marking the first expansion in six months, up from 49.7 in August. Nonmanufacturing activity, encompassing services and construction sectors, also grew to 51.7 from 51 in August.

In economic terms, China saw a return to positive territory in consumer prices in August as deflationary pressures eased. The consumer price index (CPI) registered a 0.1%

China: SSE Composite Index



rise from the previous year, a stark shift from the 0.3% drop in July. Additionally, the producer price index (PPI) showed a milder decline of 3.0% YoY in August compared to a 4.4% fall in July. Although China's exports and imports continued to contract in August, the slides were less severe than expected, with exports falling by 8.8% YoY and imports contracting by 7.3%, compared to the 12.4% fall in July.

The yuan experienced a decline of about 5% against the US dollar within the current year, inching closer to the limit within which Chinese authorities allow it to fluctuate.

China has been actively advancing its currency power on the global stage, presenting growing competition to the US dollar. While the yuan may not imminently challenge or overtake the US dollar's dominance, it has achieved notable successes in pivotal areas. For instance, China's Bank of China announced a significant "first direct investment in yuan in Argentina" on August 30, further promoting the yuan as an alternative currency for international trade, which has found traction in several countries for investment and lending activities, replacing the US dollar.

Chinese companies are increasingly assuming a pivotal role in bolstering Russia's beleaguered economy and enhancing its military capabilities. It has transpired through the trade of goods for military deployment, including in conflict zones like Ukraine. However, China's overt support for Russia is unlikely, given its profound implications on Beijing's multifaceted economic, political, and security relationships with Washington and the European Union.

In a surprising turn of events, China and the United States are taking concerted steps to foster better relations, paving the way for a potential visit by Chinese leader Xi Jinping to the United States. High-level official exchanges and other conciliatory measures are in progress to ease the strained state of their relationship.

| | 22 | 23 | 24 | 25 | 26 |
|---------------------------|-------|-------|-------|-------|------|
| GDP (%p.a.) | 3.0 | 5.0 | 4.8 | 4.0 | 3.5 |
| Inflation (%p.a.) | 2.0 | 2.2 | 1.5 | 2.0 | 2.2 |
| Trade Balance(US\$ bill.) | 420.0 | 255.0 | 150.0 | 100.0 | 50.0 |
| Rmb/\$(nom.) | 6.8 | 7.2 | 7.4 | 7.6 | 7.8 |

South Korea

South Korea is grappling with mounting economic challenges, primarily stemming from the slowdown in the Chinese economy and the deceleration of growth in developed nations. South Korean GDP is expected to remain subdued, hovering around 1% in 2023 and improving to 2.5% in 2024. The government's hopes for a second-half economic rebound this year are fading, with recent data confirming a slowdown in business activities. Notably, the nation's trade-dependent economy faces the arduous task of boosting exports in a global environment characterized by sluggish growth.

Inflation in South Korea has been on an unexpected upward trajectory. The consumer-price index surged by 3.7% from the previous year in September, following a 3.4% increase in the last month. Although there might be temporary inflationary spikes in the short term, we anticipate inflation to stabilize towards the end of 2023, with an annual average of 3.5% in 2023 and 2.5% in 2024.

The Bank of Korea remains vigilant about inflation and maintains its benchmark interest rate at a relatively high 3.5% to combat rising price pressures. In its upcoming October meeting, the central bank will decide whether to persist with the current rate or contemplate further hikes. Given the economy's fragile state, which is weighed down by weakened external demand, the central bank is expected to maintain rates at the existing level for an extended period. The added risk of a significant correction in the property market complicates any potential tightening of monetary policy.

South Korea's household debt is another factor underpinning the central bank's intention to keep rates restrictive or raise them even higher. Governor Rhee Chang-yong recently cautioned against property investments, especially when mortgage rates are poised to remain elevated for an extended duration.

The decline in South Korean exports has started to wane, with September seeing a moderated decrease of 2.1% in adjusted shipments compared to the previous year. Although headline exports still fell by 4.4% in September, it represents an improvement from the 8.3% decline witnessed the month before. South Korean exports began to slide late last year, influenced by sliding semiconductor prices and diminished demand from China. Elevated energy costs and interest rates have further weighed on global demand, which South Korea relies on for its economic vitality. Notably, exports to the United States increased 9% in September, while those to China registered gains for the second consecutive month.

Furthermore, South Korea is embarking on a significant overhaul of its currency market by opening it up to foreign financial institutions. Starting on October 18, foreign financial institutions can apply for permits to participate in the onshore dollar-won interbank market. Currently, direct trading between the Korean won and the dollar is only

Korea: Composite Index



Taiwan: Weighted TAIEX Price Index



possible through local banks for a limited time each day. The plan is to extend the onshore trading hours until 2 a.m., aligning with the close of London's business hours, in the latter half of the next year. To qualify for these permits, financial institutions must meet the capital and liquidity requirements of Basel III and hold licenses as banks or brokerages in their home countries.

This new regulation will enable non-Korean financial institutions to participate in the domestic forex market without necessitating the opening of a local branch in South Korea, a move aimed at encouraging greater foreign involvement in the country's currency market.

| | 22 | 23 | 24 | 25 | 26 |
|-------------------------|------|------|------|------|------|
| GDP (%p.a.) | 2.6 | 1.0 | 2.5 | 2.5 | 2.4 |
| Inflation (%p.a.) | 5.1 | 3.5 | 2.5 | 2.5 | 2.5 |
| Current A/c(US\$ bill.) | 50.0 | 40.0 | 35.0 | 30.0 | 30.0 |
| Won/\$(nom.) | 1450 | 1340 | 1300 | 1300 | 1400 |

Taiwan

Taiwan's economic landscape remains intertwined with the fortunes of the Chinese economy as the regional slowdown continues to cast a shadow. Our cautious GDP growth forecast for Taiwan, estimating 1% in 2023 and 1.5% in 2024, persists. The central bank has revised its GDP growth forecast for 2023 to 1.46%, a downward adjustment from its earlier prediction of 1.72%.

In terms of inflation, despite a weather-related spike in consumer prices last month, the government's proactive measures, including curbing fuel and electricity costs, have managed to keep inflation in check. Our previous inflation forecast of 2.2% remains unchanged, aligning with the central bank's consumer inflation projections.

Responding to the hawkish stance adopted by the US Federal Reserve, Taiwan's Central Bank opted to maintain its benchmark discount rate at 1.875%. This decision was primarily attributed to domestic inflation cooling and global economic uncertainties amidst tightening policies. The expectation is for inflation to dip below 2% in the following year, indicating that interest rates will likely remain stable for an extended period. This stability in interest rates is due to the spill-over effects from the US Federal Reserve's monetary policies, the performance of China's economy and the ongoing trade tensions between Washington and Beijing.

Taiwan's exports faced challenges in August, marking the 12th consecutive month of decline, albeit with a less severe drop than initially expected. There is optimism that exports may rebound in September, aligning with the year-end holiday shopping season. August imports, often regarded as a leading indicator for re-exports of finished products, experienced a 22.9% decrease to \$28.77 billion. Notably, exports to the United States displayed a promising upswing in August, rising by 8.8%, following a 3.3% annual decline in July.

The Taiwanese dollar has felt the pressure in concert with other Asian currencies, all of which have been impacted by the strengthening US dollar and the more hawkish stance taken by the US Federal Reserve.

Taiwan's upcoming presidential election is poised to be one of the most hotly contested in decades. Crucial campaign issues include slowing economic growth, low wages, and soaring property prices. These factors will be central in the race as four candidates vying to succeed President Tsai Ingwen, who is constrained by term limits. Geopolitically, the ruling party is committed to preserving Taiwan's political independence, while the opposition favours closer ties with China.

Taiwan is closely monitoring the US response to military aid for Ukraine. Taiwan believes that reducing US military support for Ukraine would embolden Beijing and weaken deterrence in Asia. In a proactive move to safeguard the island's security many years ago, President Tsai allocated substantial funds to design and construct Taiwan's submarines. Establishing a submarine fleet within its navy is seen as a strategic deterrent against the growing military prowess of China. It is because surface ships are most vulnerable to attacks from beneath the water, making submarines a critical component of Taiwan's defence strategy.

| | 22 | 23 | 24 | 25 | 26 |
|-------------------------|------|------|------|------|------|
| GDP (%p.a.) | 2.5 | 1.0 | 1.5 | 2.0 | 2.3 |
| Inflation (%p.a.) | 2.9 | 2.2 | 1.6 | 1.4 | 1.2 |
| Current A/c(US\$ bill.) | 90.0 | 65.0 | 60.0 | 60.0 | 60.0 |
| NT\$/\$(nom.) | 32.0 | 32.2 | 32.0 | 31.5 | 31.0 |



Brazil

The Brazilian economy defies expectations, offering positive surprises as inflation comes under control and economic growth gathers momentum. The government's outlook reflects this optimism, as it predicts a growth rate of 3.2% for 2023, an upward revision from its previous estimate of 2.5% in July. Furthermore, it maintains its forecast of a 2.3% increase in GDP for 2024. However, our forecast, while still positive, is more cautious. We anticipate a growth rate of 3% in 2023, followed by a slightly more conservative 2% in 2024. This caution stems from the global economic slowdown impacting major economies, while the Brazilian economy, driven primarily by domestic demand, faces certain limitations.

Unemployment in Brazil has displayed encouraging trends, with the rate dropping to 7.8% in the August period, compared to 7.9% in the three months through July and a notable improvement from the 8.9% rate seen in the same period the previous year, as reported by the Brazilian Institute of Geography and Statistics.

Brazil's central bank has made notable progress in taming inflationary expectations. Consumer prices increased by 0.35% from August 16 through September 15, resulting in a 5% year-on-year rise. Our inflation forecast for 2023 and 2024 remains at 4%, indicating a favourable trajectory. The central bank's decision to reduce its benchmark Selic interest rate by half a percentage point to 12.75% aligns with expectations. It marks the second consecutive meeting that concluded with a half-point cut, bringing the lending rate to its lowest level since June 2022. The central bank has signalled its intent to implement further cuts of the same magnitude in forthcoming meetings. This rate reduction strategy is aligned with the central bank's focus on supporting economic growth after gaining control over inflationary expectations.

Brazil's central bank chief emphasizes the necessity of anchoring inflation to the official target during a congressional hearing, addressing queries related to his investments and ties to the previous government. He points out the significant decline in core inflation but underscores the ongoing requirement for tight monetary policy. During his first meeting with President Luiz Inacio Lula da Silva, he commended the government's decision to maintain the

inflation target at 3%, considering it a pivotal step for continuing the monetary easing cycle. He also reiterated the importance of the government striving to meet its new fiscal rules, including eliminating Brazil's primary budget deficit by 2024.

Brazil's current account deficit saw a remarkable 89% reduction in August compared to the previous year's period, primarily driven by a robust trade surplus. The trade balance recorded a surplus of \$7.6 billion, a substantial increase from the \$2.6 billion surplus reported in August 2022. This surge was facilitated by a modest 0.8% increase in exports and a significant 16.8% decrease in imports. Brazil recorded a current account deficit of \$778 million in August. Over 12 months, the current account deficit

decreased to \$45.3 billion in August, down from a revised \$51.6 billion the previous month. This deficit is equivalent to 2.2% of the gross domestic product. Net foreign direct investment reached \$4.3 billion in August, slightly higher than the \$4.2 billion recorded in July. Over the 12 months through August, foreign direct investment amounted to \$65.9 billion.

The Brazilian real has experienced a resurgence and now hovers around five reais to one USD.

| | 22 | 23 | 24 | 25 | 26 |
|-------------------------|-------|-------|-------|-------|-------|
| GDP (%p.a.) | 2.9 | 3.0 | 2.0 | 2.5 | 3.0 |
| Inflation (%p.a.) | 8.0 | 4.0 | 4.0 | 4.2 | 4.2 |
| Current A/c(US\$ bill.) | -10.0 | -12.0 | -20.0 | -10.0 | -10.0 |
| Real/\$(nom.) | 5.2 | 5.0 | 5.0 | 5.1 | 5.2 |

Other Emerging Markets



Indonesia: Jakarta Composite



Malaysia: FT-Actuaries (US\$ Index)



Thailand: Composite Index



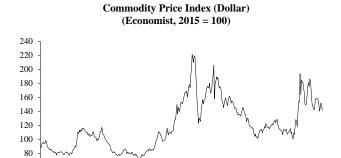
Singapore: Straits Times Index

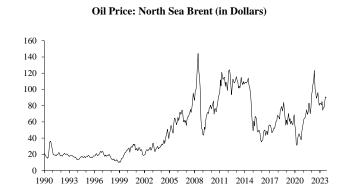


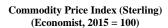
Philippines: Manila Composite



COMMODITY MARKETS





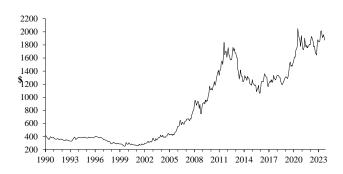


 $1990 \quad 1993 \quad 1996 \quad 1999 \quad 2002 \quad 2005 \quad 2008 \quad 2011 \quad 2014 \quad 2017 \quad 2020 \quad 2023$

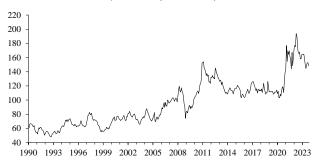
60



Gold Price (in Dollars)



Commodity Price Index (Euro) (Economist, 2015 = 100)



UK FORECAST DETAIL

Prices, Wages, Interest Rates and Exchange Rate Forecast (Seasonally Adjusted)

| | Inflation % ¹ (CPI) | Short Dated (5 Year) Interest Rates | 3 Month Int. Rates | Nominal Exchange Rate (2005=100) ² | Real Exchange Rate ³ | Real 3 Month Int. Rates % ⁴ | Inflation (RPIX) | Real Short Dated Rate of Interest ⁵ |
|--------|-----------------------------------|---|-----------------------|---|------------------------------------|---|---------------------|--|
| | | | | | | | | |
| 2020 | 0.9 | 0.1 | 0.2 | 78.2 | 72.9 | -1.3 | 1.5 | -1.4 |
| 2021 | 2.5 | 0.8 | 0.1 | 81.4 | 78.0 | -6.4 | 4.1 | -5.8 |
| 2022 | 9.1 | 2.5 | 2.0 | 79.1 | 82.4 | -7.1 | 11.6 | -6.7 |
| 2023 | 7.5 | 4.3 | 5.0 | 79.4 | 88.2 | 0.4 | 10.8 | -0.3 |
| 2024 | 3.5 | 4.2 | 4.3 | 79.1 | 89.6 | 1.8 | 5.5 | 1.7 |
| 2025 | 2.0 | 3.0 | 3.0 | 79.0 | 89.9 | 1.0 | 2.8 | 1.0 |
| 2022:1 | 6.2 | 1.4 | 0.8 | 81.7 | 81.9 | -9.4 | 8.4 | -8.8 |
| 2022:2 | 9.2 | 2.1 | 1.4 | 79.2 | 81.8 | -8.6 | 11.5 | -7.9 |
| 2022:3 | 10.2 | 2.8 | 2.3 | 77.6 | 81.7 | -6.7 | 12.4 | -6.2 |
| 2022:4 | 10.9 | 3.6 | 3.6 | 77.9 | 84.1 | -3.9 | 13.9 | -3.9 |
| 2023:1 | 10.3 | 4.0 | 4.2 | 78.1 | 85.4 | -1.8 | 13.6 | -2.0 |
| 2023:2 | 8.5 | 4.1 | 5.2 | 80.2 | 89.4 | 0.4 | 11.2 | -0.7 |
| 2023:3 | 6.1 | 4.5 | 5.2 | 80.3 | 89.1 | 1.2 | 10.1 | 0.5 |
| 2023:4 | 5.0 | 4.5 | 5.2 | 79.3 | 89.0 | 1.7 | 8.2 | 1.0 |
| 2024:1 | 4.5 | 4.3 | 5.0 | 79.0 | 89.5 | 2.1 | 7.3 | 1.4 |
| 2024:1 | 3.5 | 4.2 | 4.0 | 79.2 | 90.0 | 1.5 | 5.4 | 1.7 |
| 2024.2 | 3.0 | 4.2 | 4.0 | | 89.1 | | | |
| | 3.0 | 4.1 | 4.0 | 79.2 78.9 | 89.1 89.9 | 1.8 2.0 | 4.6 4.6 | 1.9 2.0 |
| 2024:4 | 3.0 | 4.0 | 4.0 | 18.9 | 09.9 | 2.0 | 4.0 | 2.0 |

Labour Market and Supply Factors (Seasonally Adjusted)

| | Average Earnings | Wage Growth ² | Survey Unemployment | Millions | Real Wage Rate ³ |
|--------|---------------------|-----------------------------|------------------------|----------|--------------------------------|
| | $(1990=100)^1$ | | Percent | | (1990=100) |
| 2020 | 279.1 | 1.6 | 4.5 | 1.3 | 149.7 |
| 2021 | 295.6 | 5.9 | 4.5 | 1.3 | 154.5 |
| 2022 | 313.3 | 6.0 | 3.7 | 1.0 | 151.0 |
| 2023 | 332.5 | 6.1 | 3.8 | 1.1 | 149.6 |
| 2024 | 344.7 | 3.7 | 2.9 | 0.7 | 150.0 |
| 2025 | 351.7 | 2.0 | 2.8 | 0.7 | 158.1 |
| 2022:1 | 308.8 | 5.7 | 3.7 | 1.0 | 154.6 |
| 2022:2 | 307.5 | 6.0 | 3.8 | 1.1 | 148.7 |
| 2022:3 | 316.3 | 5.9 | 3.6 | 1.0 | 149.0 |
| 2022:4 | 320.4 | 6.3 | 3.7 | 1.0 | 147.3 |
| 2023:1 | 327.0 | 5.9 | 3.8 | 1.0 | 147.8 |
| 2023:2 | 330.7 | 7.5 | 4.2 | 1.2 | 147.3 |
| 2023:3 | 334.3 | 5.7 | 3.8 | 1.1 | 148.4 |
| 2023:4 | 337.9 | 5.5 | 3.5 | 0.9 | 147.9 |
| 2024:1 | 342.5 | 4.7 | 3.0 | 0.8 | 148.2 |
| 2024:2 | 343.3 | 3.8 | 3.0 | 0.7 | 147.8 |
| 2024:3 | 345.0 | 3.2 | 2.8 | 0.7 | 148.7 |
| 2024:4 | 348.0 | 3.0 | 2.8 | 0.7 | 147.9 |

Whole Economy

Consumer's Expenditure Deflator
Sterling Effective Exchange Rate Bank of England
Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate

Treasury Bill Rate less one year forecast of inflation

Short Dated 5 Year Interest Rate less average of predicted 5 year ahead inflation rate

Average Earnings Wage rate deflated by CPI

Estimates and Projections of the Gross Domestic Product¹ (£ Million 1990 Prices)

| | Expenditure | £ Million | Non-Durable | Private Sector | Public | Net Exports ⁵ | AFC |
|---------|-------------|------------|--------------------------|--|---------------------------------------|--------------------------|----------|
| | Index | '90 prices | Consumption ² | Gross Investment Expenditure ³ | Authority Expenditure ⁴ | | |
| 2020 | 150.6 | 721243.1 | 427576.4 | 250934.6 | 199232.3 | -33095.4 | 123404.8 |
| 2021 | 163.7 | 783781.6 | 453975.6 | 276335.2 | 224535.7 | -36903.3 | 134161.6 |
| 2022 | 170.6 | 816950.6 | 473683.3 | 277328.7 | 228365.7 | -23824.9 | 138602.2 |
| 2023 | 171.3 | 820238.8 | 475727.6 | 275870.9 | 225318.2 | -18636.0 | 138041.9 |
| 2024 | 174.6 | 836028.5 | 489782.5 | 270125.3 | 232155.7 | -15892.2 | 140142.8 |
| 2025 | 178.0 | 852456.7 | 505723.0 | 269227.9 | 239198.4 | -18462.8 | 143229.8 |
| 2020/19 | -10.4 | | -10.1 | -18.8 | -4.8 | | 4.1% |
| 2021/20 | 8.7 | | 7.3 | 11.9 | 13.4 | | 8.7% |
| 2022/21 | 4.2 | | 4.7 | 1.1 | 1.9 | | 3.3% |
| 2023/22 | 0.4 | | 0.4 | -0.6 | -1.3 | | -0.4% |
| 2024/23 | 1.9 | | 3.0 | -2.1 | 3.0 | | 1.5% |
| 2025/24 | 2.0 | | 3.3 | -0.4 | 3.0 | | 2.2% |
| 2022:1 | 170.9 | 204558.1 | 118589.6 | 73715.5 | 56345.4 | -9205.0 | 34887.4 |
| 2022:2 | 170.8 | 204429.6 | 118224.7 | 66135.7 | 57461.4 | -2851.4 | 34540.8 |
| 2022:3 | 170.3 | 203859.4 | 118034.1 | 69576.5 | 56974.6 | -6094.7 | 34631.1 |
| 2022:4 | 170.5 | 204103.5 | 118834.9 | 67900.9 | 57584.2 | -5673.8 | 34542.7 |
| 2023:1 | 170.9 | 204663.7 | 118824.7 | 75780.7 | 55700.4 | -11224.9 | 34417.2 |
| 2023:2 | 171.3 | 205143.0 | 118812.9 | 67471.5 | 56116.4 | -2756.3 | 34501.5 |
| 2023:3 | 171.4 | 205180.1 | 118801.0 | 66568.6 | 56538.7 | -2249.1 | 34479.1 |
| 2023:4 | 171.4 | 205252.1 | 119289.0 | 66050.1 | 56962.7 | -2405.7 | 34644.0 |
| 2024:1 | 173.5 | 207731.3 | 120214.6 | 74503.9 | 57390.1 | -9648.0 | 34729.3 |
| 2024:2 | 174.3 | 208671.2 | 122256.6 | 66012.3 | 57820.4 | -2454.9 | 34963.2 |
| 2024:3 | 175.2 | 209768.4 | 123117.0 | 65434.6 | 58254.1 | -1824.1 | 35213.2 |
| 2024:4 | 175.3 | 209857.6 | 124194.4 | 64174.6 | 58691.1 | -1965.2 | 35237.3 |

Financial Forecast

| | PSBR/GDP % ¹ | GDP ¹ | PSBR | Current |
|--------|-------------------------|------------------|----------------|---------|
| | | (£bn) | (£bn) | Account |
| | | ` , | Financial Year | (£ bn) |
| 2020 | 15.5 | 2090.9 | 312.9 | -67.5 |
| 2021 | 5.0 | 2464.4 | 121.1 | -34.3 |
| 2022 | 4.7 | 2767.3 | 130.5 | -93.9 |
| 2023 | 3.3 | 2960.9 | 95.6 | -25.4 |
| 2024 | 1.2 | 3108.5 | 38.3 | -14.7 |
| 2025 | 0.7 | 3235.8 | 23.5 | 1.5 |
| 2022:1 | 0.0 | 646.4 | -0.2 | -50.5 |
| 2022:2 | 6.3 | 668.4 | 42.1 | -28.2 |
| 2022:3 | 3.6 | 682.4 | 24.9 | -12.7 |
| 2022:4 | 6.0 | 701.1 | 42.3 | -2.5 |
| 2023:1 | 3.0 | 715.4 | 21.2 | -10.8 |
| 2023:2 | 7.2 | 729.2 | 52.3 | -9.8 |
| 2023:3 | 2.4 | 730.0 | 17.3 | -3.3 |
| 2023:4 | 2.1 | 741.9 | 15.5 | -1.5 |
| 2024:1 | 1.4 | 759.8 | 10.5 | -7.3 |
| 2024:2 | 1.3 | 768.3 | 9.9 | -8.6 |
| 2024:3 | 1.2 | 769.1 | 9.6 | 0.1 |
| 2024:4 | 1.3 | 781.8 | 9.9 | 1.1 |

GDP at market prices (Financial Year)

GDP at factor cost. Expenditure measure; seasonally adjusted

Consumers expenditure less expenditure on durables and housing

Private gross domestic capital formation plus household expenditure on durables and clothing plus private sector stock building

General government current and capital expenditure including stock building

Exports of goods and services less imports of goods and services

WORLD FORECAST DETAIL

| Growth Of Real GNP | | | | | | | | |
|--------------------|------|-------|------|------|------|------|--|--|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | | |
| U.S.A. | 2.2 | -2.8 | 5.9 | 2.1 | 0.7 | 1.2 | | |
| U.K. | 1.6 | -10.4 | 8.7 | 4.2 | 0.4 | 1.9 | | |
| Japan | -0.4 | -4.3 | 2.2 | 1.0 | 1.1 | 1.1 | | |
| Germany | 1.1 | -3.7 | 2.6 | 1.9 | -0.3 | 1.4 | | |
| France | 1.9 | -7.9 | 6.8 | 2.5 | 0.3 | 0.6 | | |
| Italy | 0.5 | -9.1 | 6.6 | 3.3 | -0.1 | 0.3 | | |

| Growth Of Consumer Prices | | | | | | | | |
|---------------------------|------|------|------|------|------|------|--|--|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | | |
| U.S.A. | 1.8 | 1.3 | 4.7 | 8.0 | 3.9 | 2.5 | | |
| U.K. | 1.7 | 0.9 | 2.5 | 9.1 | 7.5 | 3.5 | | |
| Japan | 0.5 | 0.0 | -0.2 | 2.5 | 2.1 | 1.2 | | |
| Germany | 1.4 | 0.5 | 3.1 | 7.9 | 6.2 | 2.7 | | |
| France | 1.1 | 0.4 | 1.7 | 5.4 | 4.0 | 2.0 | | |
| Italy | 0.6 | -0.1 | 1.9 | 7.6 | 5.0 | 2.4 | | |

| Real Short | Real Short-Term Interest Rates | | | | | | | | | |
|------------|--------------------------------|------|------|------|------|------|--|--|--|--|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | | | | |
| U.S.A. | 0.2 | -4.6 | -7.1 | -1.7 | 2.4 | 2.0 | | | | |
| U.K. | -0.1 | -2.3 | -9.0 | -5.5 | 2.5 | 2.3 | | | | |
| Japan | 0.1 | 0.3 | -2.4 | -2.1 | -1.1 | -1.4 | | | | |
| Germany | -0.9 | -3.6 | -8.5 | -5.9 | 0.4 | 0.5 | | | | |
| France | -0.8 | -2.2 | -6.0 | -3.7 | 1.1 | 0.8 | | | | |
| Italy | -0.3 | -2.4 | -8.2 | -4.7 | 0.7 | 0.7 | | | | |

| Nominal S | Nominal Short-Term Interest Rates | | | | | | | | |
|-----------|-----------------------------------|------|------|------|------|------|--|--|--|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | | | |
| U.S.A. | 1.5 | 0.1 | 0.1 | 2.2 | 4.9 | 4.0 | | | |
| U.K. | 0.8 | 0.2 | 0.1 | 2.0 | 5.0 | 4.3 | | | |
| Japan | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | | | |
| Germany | -0.4 | -0.5 | -0.6 | 0.3 | 3.1 | 2.8 | | | |
| France | -0.4 | -0.5 | -0.6 | 0.3 | 3.1 | 2.8 | | | |
| Italy | -0.4 | -0.5 | -0.6 | 0.3 | 3.1 | 2.8 | | | |

| Real Long | Real Long-Term Interest Rates | | | | | | | | | |
|-----------|-------------------------------|------|------|------|------|------|--|--|--|--|
| • | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | | | | |
| U.S.A. | -2.2 | -3.3 | -2.1 | 1.3 | 1.5 | 1.2 | | | | |
| U.K. | -4.1 | -4.8 | -4.0 | -0.9 | 2.0 | 2.2 | | | | |
| Japan | -1.1 | -1.3 | -1.7 | -1.5 | -1.1 | -1.3 | | | | |
| Germany | -4.3 | -5.0 | -4.4 | -0.9 | 0.1 | 0.0 | | | | |
| France | -2.6 | -3.3 | -2.9 | -0.6 | 0.9 | 0.7 | | | | |
| Italy | -2.0 | -3.3 | -2.6 | 0.3 | 2.3 | 2.2 | | | | |

| Nominal Long-Term Interest Rates | | | | | | | | | |
|----------------------------------|------|------|------|------|------|------|--|--|--|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | | | |
| U.S.A. | 1.9 | 0.9 | 1.6 | 3.8 | 3.6 | 3.2 | | | |
| U.K. | 0.6 | 0.1 | 0.8 | 2.5 | 4.3 | 4.2 | | | |
| Japan | 0.0 | 0.0 | 0.1 | 0.2 | 0.5 | 0.5 | | | |
| Germany | -0.2 | -0.6 | -0.2 | 2.1 | 2.3 | 2.1 | | | |
| France | 0.1 | -0.3 | 0.2 | 1.8 | 2.9 | 2.7 | | | |
| Italy | 1.4 | 0.5 | 1.2 | 3.0 | 4.4 | 4.2 | | | |

| Index Of | Index Of Real Exchange Rate (2010=100) ¹ | | | | | | | | | |
|----------|---|-------|-------|-------|-------|-------|--|--|--|--|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | | | | |
| U.S.A. | 117.1 | 118.7 | 116.1 | 128.3 | 128.0 | 128.5 | | | | |
| U.K. | 99.5 | 99.6 | 103.7 | 100.7 | 101.1 | 100.7 | | | | |
| Japan | 77.0 | 77.8 | 71.0 | 59.9 | 59.2 | 59.3 | | | | |
| Germany | 96.0 | 97.1 | 97.9 | 95.0 | 95.1 | 95.4 | | | | |
| France | 93.9 | 94.7 | 94.0 | 89.6 | 89.5 | 89.0 | | | | |
| Italy | 95.0 | 95.4 | 95.1 | 91.6 | 91.3 | 89.9 | | | | |

Italy 95.0 95.4 95.1 91.6 91.3 89.9

¹ The real exchange rate is the domestic price level relative to the foreign price level converted into domestic currency. A rise in the index implies an appreciation in the real exchange rate.

| Nominal Exchange Rate (Number of Units of Local Currency To \$1) | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--|--|--|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | | | |
| $U.S.A.^1$ | 122.52 | 124.77 | 119.77 | 127.34 | 126.90 | 127.40 | | | |
| U.K. | 1.28 | 1.28 | 1.38 | 1.24 | 1.24 | 1.24 | | | |
| Japan | 109.10 | 106.60 | 110.45 | 133.10 | 136.20 | 137.80 | | | |
| Eurozone | 0.89 | 0.87 | 0.85 | 0.95 | 0.98 | 0.99 | | | |

 $^{^1}$ The series for the USA is a nominal broad U.S dollar index (2010=100); the series for the UK is $\$ per £

^{*} Forecasts based on the Liverpool World Model